clarifications. The Examiner contended that a wavelength sensitive device cannot redirect the image light to different directions or locations.

Appellants respectfully submit that it is well know in the art that wavelength sensitive units are capable of redirecting first and second complementary images to different spatial locations according to wavelength. For example, a prism does precisely this – direct beams of light having different wavelengths to different spatial locations. Hence, when white light enters a prism, the component colors (wavelengths) emerge at different angles to different spatial locations.

In view of the above, Appellants respectfully submit that claims 1-7, 9-16 and 18-38 comply with the enablement requirement under 35 USC §112, First Paragraph.

2. Claims 1-7, 9-16, 18-23, 35 and 37 are patentable under 35 USC §103(a) over Preston

In the Office Action, the Examiner rejected claims 1-7, 9-16, 18-23, 35 and 37 under 35 U.S.C. § 03(a), as being unpatentable over Preston.

Appellants respectfully assert that Preston does not render claims 1-7, 9-16, 18-23, 35 and 37 obvious because Preston does not disclose, teach or suggest every element of the these claims.

Preston describes "A holographic display system comprising left and right optical systems . . . The optical systems each comprise an image display operable to display an input image and first and second holographic devices." (Abstract).

In the device according to Preston, each of the image display units takes a single image and decomposes it into its RGB components and transmits each of these separately to the same area of the eye piece 38, thereby recreating the single image. Thus, each of the left and right input image displays 40 projects only one image on its respective portion of the reflective eye piece 38. That is, the left input image display projects a first image on the left side of the eye piece 38 to be

viewed by the left eye, and the right input image display projects a second image on the right side of the eye piece 38 to be viewed by the right eye. This is clearly seen in the series of figures including Figures 2A and 2B. Finally, these two images, produced by two different input image displays on separate portions of the eye piece to be viewed by different eyes do not physically overlap on the eye piece.

The Examiner contended that in each side of the eye piece, the color components of each image are "first and second complementary images differing in wavelength." These, however, are not first and second complementary images, as recited in independent claims 1 and 10, but rather first and second color components of the same image.

Moreover, because each input image display 40 displays a single image in its color components, and not two different images (as recited in independent claims 1 and 10), this same single image of Preston is reconstructed at the same area of the eye piece 38 (see Preston's Figure 1). Preston therefore does not teach directing "first and second images to at least first and second, respective, spatial regions of a reflecting unit based on said different optical property." Preston, at most, describes directing the first and second color components of the same image to the same area of the eye piece, thereby producing a single image at one location.

As an aside, Appellants respectfully disagree with the Examiner's assertion regarding Preston's the field of view. While it may be true that the overall image seen by the viewer in Preston is wider than that of each of the relay optics, this widening is not performed by one relay optic, but by the combination of two relay optics.

Therefore, the Preston reference does not render obvious independent claims 1 and 10 because Preston does not teach or suggest neither (a) an image source to produce along a common optical axis at least first and second

complementary images, nor (b) a redirecting unit coupled to said image source to direct at least said first and second images to at least first and second, respective, spatial regions of a reflecting unit.

Likewise, with respect to independent claim 19, the method of operation of Preston does not teach or suggest "producing along a common optical axis at least first and second complementary images" nor "directing at least said first and second images to at least first and second, respective, spatial regions of a reflecting unit."

In view of the above, dependent claims 1, 10 and 19 of the Application are not rendered obvious by Preston, either alone or in combination with any other art of record.

Claims 2-7, 9, 11-16, 18, 20-23, 35 and 37, which depend from independent claims 1, 10 and 19, are likewise not rendered obvious in view of Preston and/or the art of record.

Accordingly, Appellants respectfully submit that claims 1-7, 9-16, 18-23, 35 and 37 are patentable under 35 USC §103(a) over Preston.

3. Claims 34, 36 and 38 are patentable under 35 USC §103(a) over Preston in view of Chauvin

In the Office Action, the Examiner rejected claims 34, 36 and 38 under 35 U.S.C. §103(a), as being unpatentable over Preston as applied to claims 1, 10 and 19 above, and further in view of Chauvin.

In Chauvin, "[a] binocular, stereoscopic helmet visor display is described, wherein a polarization x-prism is used to separate the left eye imagery from the right eye imagery when each channel has a unique polarization. Separate image sources generate the left and right eye imagery, and the respective left and right image light is passed through polarizers so that the respective left and right image light is of opposite polarizations." (Abstract, emphasis added).

As discussed with respect to Preston, above, Chauvin does not teach or suggest (a) an image source to produce along a common optical axis at least first and second complementary images, and/or (b) a redirecting unit coupled to said image source to direct at least said first and second images to at least first and second, respective, spatial regions of a reflecting unit, as recited in claims 1, 10 and 19, from which claims 34, 36 and 38 respectively depend indirectly.

Therefore, claims 34, 36 and 38 are not rendered obvious in light of Preston in view of Chauvin.

4. Claims 8 and 17 are patentable under 35 USC §103(a) over Florence

In the Office Action, the Examiner rejected claims 8 and 17 under 35 U.S.C. §103(a), as being unpatentable over Florence.

The Examiner contended that Florence describes all the features of claims 8 and 17, with the exception that Florence does not disclose use of a reflecting unit as the means for forming the integrated image; however, the Examiner argued that using a reflecting unit as the means for forming the integrated image as claimed would have been obvious to one skilled in the art.

Appellants respectfully traverse the rejection of claims 8 and 17 based on Florence because a *prima facie* case of obviousness has not been established. Florence does not disclose, teach or suggest all of the features of claims 8 and 17 of the present Application.

Florence describes a "method of using a display system having a spatial light modulator (14) to display holographic images. The spatial light modulator (14) generates images that represent vertical strips of a hologram. These images are de-magnified by a three-dimensional optics unit (18), in the horizontal direction so as to form image strips. A scanning mirror (45) scans the image strips in a

series across an image plane at a rate sufficiently fast that the viewer perceives a composite hologram comprised of these image strips." (Abstract).

In particular, Florence describes a digital micro-mirror device (DMD) 14 (or other spatial light modulator (SLM)) to produce a single image. This entire single image is then relayed continuously, vertical strip by vertical strip, using relay optics 41-43 and a scanning mirror 45, and then to an image plane 46. (Florence, column 5, lines 3-13; Figure 4). Thus, in Florence, an entire image is produced by an image source, but only portions of the image are viewed at the image plane in a scanning action.

Florence does not render obvious any of claims 8 and 17 because Florence does not disclose, teach or suggest at least "an image source to produce along a common optical axis at least first and second complementary images", as recited in claims 8 and 17.

Appellants submit that to the extent that the vertical strips of Florence may be called first and second complementary images, the vertical strips of Florence are not produced along a common optical axis, but rather, along adjacent but separate optical axes. Nor would producing the different vertical strips along a common optical axis have been obvious in light of Florence.

Therefore, claims 8 and 17 are not rendered obvious in view of Florence.

Applicants: YONA, Zvi et al. Attorney Docket No.: P-3068-US
Serial No.: 09/818,575